

PATENT
Conf. 8125

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Hugh G. Bowerman, et al. Examiner: to be assigned
Serial No. 10/595,675 Group Art Unit: 3679
Filed: May 3, 2006 Docket No. 091350-011600
Title: TRAFFIC CONTROL BARRIERS

RECEIVED
4 FEB 2008

CERTIFICATE UNDER 37 CFR 1.10
'Express Mail' mailing label number: ED 813565847 US
Date of Deposit: February 4, 2008

Legal Staff
International Division

I hereby certify that this paper or fee is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to Mail Stop PCT, Commissioner for Patents, Office of PCT Legal Administration, P.O. Box 1450, Alexandria, Virginia, 22313-1450.

Name: Jason Livingston

REQUEST FOR RECONSIDERATION OF PETITION DECISION

Commissioner for Patents
Post Office Box 1450
Alexandria, Virginia 22313-1450

Sir/Madam:

Applicant respectfully requests reconsideration of the Decision dismissing Applicant's Petition to Proceed with Application on Behalf of Non-Signing Inventors - 37 CFR § 1.47(b) and requests a two month extension of time to reset the period for response which expired on December 9, 2007 so as to expire on February 9, 2008.. An appropriate fee authorization is included with the following remarks.

In the Petition Decision mailed October 9, 2007, the examiner's basis for dismissal was two-fold:

1. Petitioners have not shown that a complete copy of the application papers was forwarded to either inventor. The letters submitted as exhibits C, D, and F indicate that only a declaration and assignment were enclosed. Therefore, the lack of response by the

inventors does not constitute a refusal. Petitioners must provide a complete copy of the application (specification, claims and drawings) to the inventors before a refusal can be shown. For this reason, item (2) of 37 CFR 1.47(a) is not yet satisfied.

2. Concerning item (4), there is no citizenship information for Mr. Gibbs and Mr. Whitton on the declaration. The citizenship information is required by 37 CFR 1.497(a)(3). For this reason, item (4) of 37 CFR 1.47(a) is also not satisfied.

In order to respond appropriately to these bases for refusal, Corus UK Limited sent a first set of documents to the non-signing inventors John Whitton and Lawrence Gibbs by recorded mail on December 19 and 20, 2007 respectively. However, documented proof of delivery and receipt was not obtained. Therefore a second set of documents were sent to each non-signing co-inventor on January 9, 2008.

Enclosure A hereto is a copy of the letter dated January 9, 2008 transmitting the application, (specification, claims and drawings) and preliminary amendment, Declaration and Assignment to Mr. Gibbs for signature. At the end of this enclosure A is the Royal Mail tracking receipt showing that the letter was actually delivered on January 11, 2008. No response from Mr. Gibbs has been received or is believed to be forthcoming. Mr. Lawrence Gibbs is a UK citizen according to Corus UK Limited records as evidenced by the email (Enclosure C) to the undersigned attorney from Claire Evans, Corus's UK attorney.

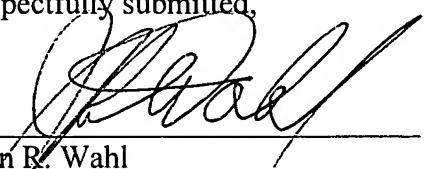
Enclosure B hereto is a copy of the letter dated January 9, 2008 transmitting the application, (specification, claims and drawings) and preliminary amendment, Declaration and Assignment to Mr. John Whitton on January 9, 2008. At the end of this Enclosure B is the Royal Mail tracking record showing attempted delivery and indicating that Mr. Whitton is no longer at the address known to Corus UK Limited. Mr. Whitton left no forwarding address, and thus the documents were returned to Corus on January 14, 2008. According to Corus UK Limited records, John Whitton is a UK citizen as evidenced by the email (Enclosure C) to me from Claire Evans, Corus's UK attorney.

It is respectfully submitted that Enclosures A, B and C provide the proper documentation required under 37 CFR 1.47 such that items (2) and (4) are now satisfied. Accordingly, it is

believed that the Petition filed September 4, 2007, along with the documentation submitted herewith, should be reconsidered and the Petition now granted.

The Commissioner is hereby authorized to charge the two month extension of time fee of \$460.00 set forth in § 1.17(a)(2) and any other required fee in connection with the submission of this paper, or to credit any overpayment to Deposit Account No. 50-2638. Please ensure that Attorney Docket Number 091350-011600 is referred to when charging any payments or credits for this case.

Respectfully submitted,


John R. Wahl
Reg. No. 33,044
Attorney for Corus UK Limited

Date: February 4, 2008

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Enclosure A



Our Ref: JATaj03LG

Lawrence Gibbs
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09 January 2008

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**Re: US Patent Application No: 10/595,675 based on International Patent Application
No: PCT GB2004/004419 Vehicle Barrier**

Dear Lawrie

The above patent has now been filed with the US Patent Office, to enable us to complete the filing; we require your signature on both copies of the Assignment and the Declaration, which are enclosed. We have also added a copy of the Application for your perusal. We would be very grateful for your response by return, I enclose a pre-addressed envelope for your convenience.

Yours sincerely

A handwritten signature in black ink that reads "Alison Judge".

Alison Judge, Ms
Administrator



Lawrence Gibbs
74 Three Elms Road
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20 December 2007

RECEIVED

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**Re: US Patent Application No: 10/595,675 based on International Patent Application
No: PCT GB2004/004419 Vehicle Barrier**

Dear Lawrie

The above patent has now been filed with the US Patent Office, to enable us to complete the filing; we require your signature on both copies of the Assignment and the Declaration, which are enclosed. We have also added a copy of the Application for your perusal. We would be very grateful for your response by return, I enclose a pre-addressed envelope for your convenience.

Yours sincerely

A handwritten signature in black ink, appearing to read "Alison Judge".

Alison Judge, Ms
Administrator

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/054582 A1

(51) International Patent Classification⁷: E01F 13/02. (74) Agents: FRY, Alan, Valentine et al.; Fry Heath & Spence LLP, The Gables, Massets Road, Horley, Surrey RH6 7DQ (GB).

(21) International Application Number:

PCT/GB2004/004419

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DB, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NL, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 20 October 2004 (20.10.2004)

(25) Filing Language: English

(26) Publication Language: English

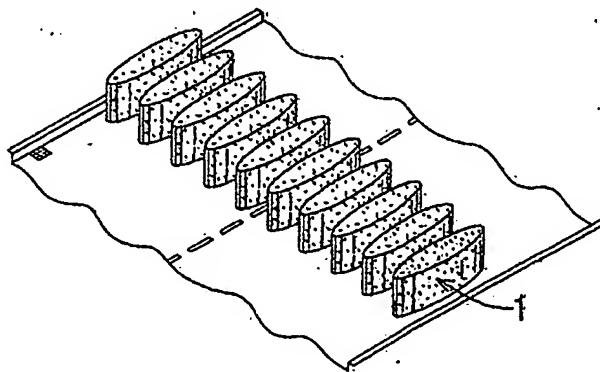
(30) Priority Data:
0325693.0 4 November 2003 (04.11.2003) GB

(71) Applicant (for all designated States except US): CORUS UK LIMITED [GB/GB]; 30 Millbank, London SW1P 4WY (GB).
(72) Inventors; and
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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARPO (BW; GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CR, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
Published:
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRAFFIC CONTROL BARRIERS



(57) Abstract: A traffic control barrier comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors. The longitudinal axis of the or each connector extends in a direction transverse to the longitudinal axis of each block and in plan view, each block may be generally elliptical or rectangular.

TRAFFIC CONTROL BARRIERS

This Invention relates to barriers for controlling the flow of traffic.

Barriers for preventing a vehicle entering a designated area are well known. These barriers typically include, for example, permanent walls and bollards, neither of which are readily deployable. Where deployable barriers are employed, these typically comprise a series of heavy concrete blocks spaced apart by a distance less than the width of a vehicle whose access is to be prevented. These blocks are difficult to transport and manoeuvre in place because of their shape and weight, are unsightly and can often be displaced sufficiently to enable a vehicle to pass.

Safety control barriers for redirecting traffic on, for example, a motorway under repair, also typically comprise a series of individual elongate blocks spaced apart to define one or more sides of a lane to be followed by traffic. Such blocks are typically rectangular in plan view and are, on occasions, connected together at their ends by rods, chains or other similar components.

The present Invention sets out to provide traffic control barriers which are more readily transportable and manoeuvrable and which are more efficient in controlling traffic flow than presently available barriers.

In one aspect, the Invention provides a traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

In plan view, each block may be generally elliptical or rectangular.

Pads of a compressible material may be positioned below each block. These pads may be positioned at locations at or adjacent to the block ends. Additional pads may be positioned at locations intermediate the block ends. In a preferred embodiment, neighbouring pads are spaced apart such that their total length is less than that of the respective block.

The underside of each block and/or each pad may be formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

Preferably, the blocks are produced wholly or predominantly from a cementitious material, e.g. concrete. In such an arrangement, the upstanding sides of a concrete block may be housed within a metallic casing. The casing may be produced from, for example, steel or aluminium. One or more metal rods may be welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces. The longitudinal axis of the or each welded rod may be substantially normal to the longitudinal axis of the casing. The rods may be welded at their ends to the casing walls by a friction welding technique.

In another aspect, the invention provides a traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

In a further aspect, the invention provides a method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks, positioning these blocks side-by-side across an area from which traffic is to be excluded, and securing each

block to the or each neighbouring block by one or more metallic connectors in a detachable manner.

Each block may be produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse (e.g. substantially normal) to the longitudinal axis of the housing.

The invention will now be described, by way of example only, with reference to the accompanying diagrammatic drawings in which:-

Figure 1 is a schematic view of a traffic control barrier in accordance with the invention positioned across a road surface;

Figure 2 is a plan view of the upper surface of a block which forms part of the vehicle barrier illustrated in Figure 1;

Figure 3 is a plan view of the under-surface of the block illustrated in Figure 2;

Figure 4 is side view of the block illustrated in Figures 2 and 3; and

Figure 5 is a side view in section of a metallic connector used to connect neighbouring pairs of the blocks illustrated in Figures 1 to 4.

As will be seen from Figure 1, a traffic control barrier in accordance with the invention comprises a plurality of side-by-side elongate concrete blocks 1 spaced apart by a distance significantly less than that of a vehicle whose progress is to be controlled. As shown, the blocks are generally elliptical in plan view and are positioned with their rounded ends directed towards any traffic which may approach the barrier. Thus, an entire roadway or entrance can effectively be sealed off from a flow of traffic by

suitable positioning of the barrier blocks. Other elongate shapes, such as rectangular or diamond, can be adopted for the individual blocks.

As will be seen from Figures 2 to 4, each block comprises a central mass of concrete 2 enveloped in a steel casing 3 formed from steel plates 4, 5. Rigid steel bars 6 extend between the inner surfaces of the plates 4, 5 with their ends welded to the plates by, for example, a friction welding technique. At their side edges, the plates are welded to upstanding metal tubes 7 to define the generally elliptical shaping for the blocks.

Open ended tubes 8 extend through the blocks with their open ends projecting a small distance from the casing outer surface. These open ends may be selectively closed by suitably dimensioned removable caps (not shown). Lifting hoops 9 (see Figure 4) project from the upper surface of each block to assist manoeuvring and positioning of the blocks in use. Each lifting hoop includes an anchorage 11 embedded in the concrete mass.

As will be seen from Figure 3, ribbed rubber pads 12 are secured to the under-surface of each block to increase the contact stress between the blocks and the road surface on which it is mounted. The undersurface of the pads may comprise a material having a high coefficient of friction and the pads 12 preferably extend over the full width of the block undersurface and are positioned towards each block end. Additional pads may be provided.

Manufacture of the blocks is achieved by friction welding the steel bars 6 to the inner surface of each steel plate 4, 5 and welding the plate ends to the metal tubes 7. The tubes 8 are positioned between suitably dimensioned openings formed in the plate surfaces and the entire central area of each block is filled with concrete. Prior to casting of the concrete, the lifting hoop anchorages 11 are positioned as shown in Figure 2. Once the concrete is set, the ribbed pads 12 are secured to the under-surface of

each block and each lifting hoop 9 fitted to its anchorage. For additional weight, Iron Ingots or the like may be positioned within the casing before casting of the concrete.

Typically, the height of each block is between 800 and 1000mm with the tubes 8 positioned approximately at mid-height of the plates 4, 5. The length of each block is typically between 2000mm and 4000mm and the maximum width of each block is typically between 450 and 650mm.

Connectors for detachably joining the blocks together are illustrated in Figure 5. These connectors include the metal tubes 8 which are embedded within the concrete mass of the blocks. Each tube 8 has a bore for receiving one or a series of connector rods 15. Each rod is formed at its ends with external threads to receive an internally threaded tubular end-piece 16 positioned one at each end of a metallic connecting member 17. The connector rod 15 extends within the metal tube 8 by a distance of at least 1.5 x tube internal diameter. Flats may be formed on each connecting member to assist the connection procedure.

When a traffic control barrier is required, several blocks are transported to site and off-loaded from the carrying vehicle using a conventional lifting device which cooperates with the hoops 9. As a block is positioned, one or a series of threaded rods 15 are inserted into the bore of the block and the female end of a connecting member 16 is secured to the exposed end of the outermost threaded rod. A second block is then positioned close to the first block and the other female end of the connecting member is secured to the bore mounted threaded rod of that block. This process is repeated until the entire road section to which traffic access is to be refused is covered. To remove the barrier, this process is repeated in reverse.

It will be appreciated that the foregoing is merely exemplary of traffic control barriers in accordance with the invention and that

modifications can readily be made thereto without departing from the scope of the invention as set out in the accompanying claims.

CLAIMS

1. A traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.
2. A barrier as claimed in claim 1 wherein the metallic connectors wherein the metallic connectors are rigid.
3. A barrier as claimed in claim 1 or claim 2 wherein in plan view, each block is generally elliptical or rectangular.
4. A barrier as claimed in any one of claims 1 to 3 wherein pads of a compressible material are positioned below each block.
5. A barrier as claimed in claim 4 wherein the undersurface of each pad has a relatively high coefficient of friction.
6. A barrier as claimed in claim 4 or claim 5 wherein the pads are positioned at locations at or adjacent to the block ends.
7. A barrier as claimed in any one of claims 4 to 6 wherein additional pads are positioned at locations intermediate the block ends.
8. A barrier as claimed in any one of claims 4 to 7 wherein neighbouring pads are spaced apart such that their total length is less than that of the respective block.
9. A barrier as claimed in any one of the preceding claims wherein the underside of each block and/or each pad is formed with a series of

ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

10. A barrier as claimed in any one of the preceding claims wherein the blocks are produced wholly or predominantly from a cementitious material.
11. A barrier as claimed in any one of the preceding claims wherein one or more metal rods are welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces.
12. A barrier as claimed in claim 11 wherein the longitudinal axis of the or each welded rod is substantially normal to the longitudinal axis of the casing.
13. A barrier as claimed in claim 11 or claim 13 wherein the rods are welded at their ends to the casing walls by a friction welding technique.
14. A traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.
15. A method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks each produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse to the longitudinal axis of the housing, positioning these blocks side-by-side across an area from which traffic is to be excluded, and

WO 2005/054582

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securing each block to the or each neighbouring block by one or
more metallic connectors in a detachable manner.

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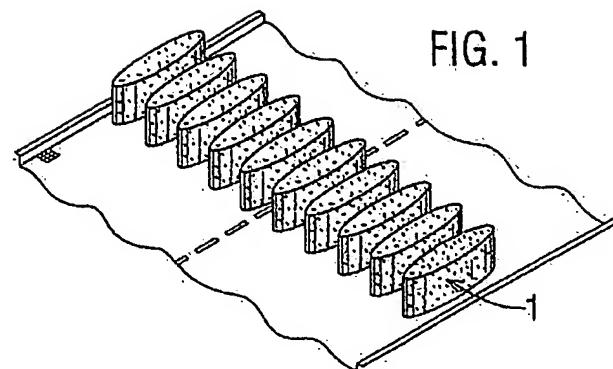


FIG. 1

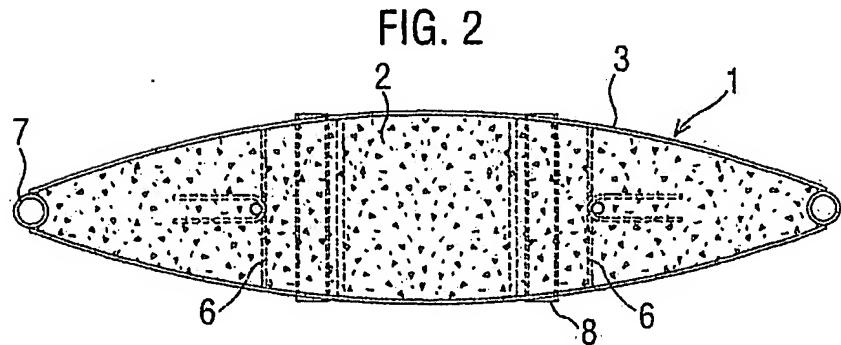
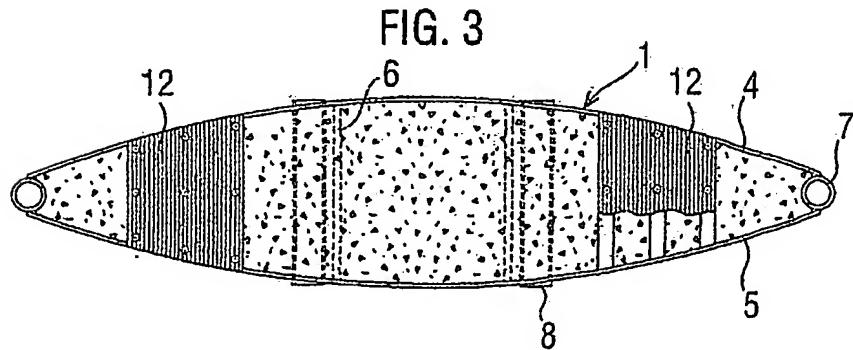


FIG. 2



SUBSTITUTE SHEET (RULE 26)

2/2

FIG. 4

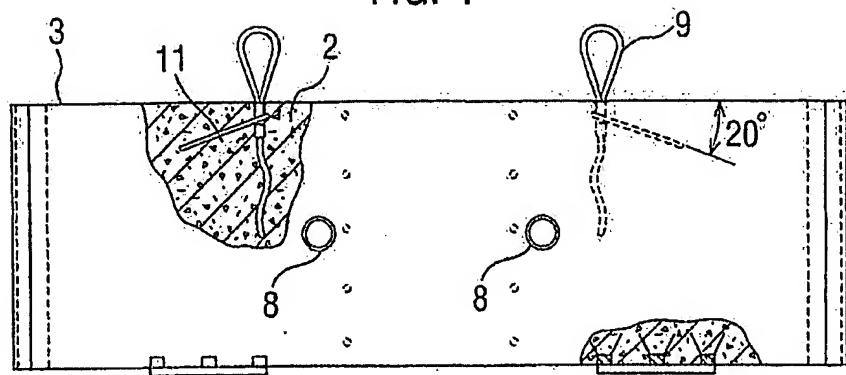
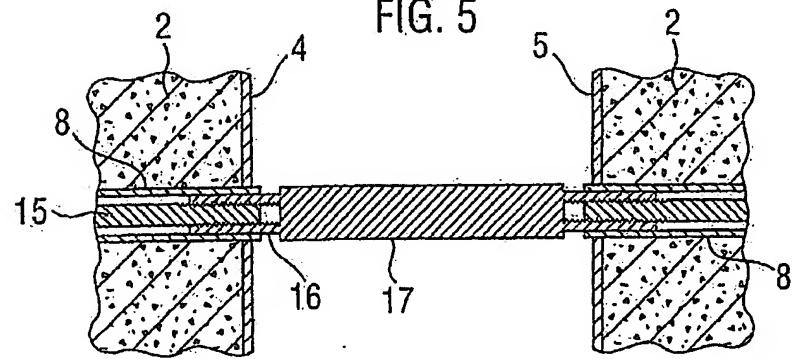


FIG. 5



SUBSTITUTE SHEET (RULE 26)

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/GB2004/004419

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E01F13/02 E01F13/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E01F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 990 736 A (PEREIRA CARLOS) 5 April 2000 (2000-04-05) paragraph '0012! - paragraph '0032!; figures 1,2,4	1-6,12, 14
P,X	FR 2 841 267 A (FERRARI ROLAND) 26 December 2003 (2003-12-26) page 2, paragraph 2 - page 4, paragraph 3; figures 1,2	1,3,9, 10,14
P,A	EP 1 441 071 A (CORUS UK LTD) 28 July 2004 (2004-07-28) the whole document	1-15

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubt on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *&* document member of the same patent family

Date of the actual completion of the International search

25 November 2004

Date of mailing of the International search report

03/02/2005

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Authorized officer

Geiger, H

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int'l Application No
P GB2004/004419

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0990736	A	05-04-2000	FR EP	2784126 A1 0990736 A1	07-04-2000 05-04-2000
FR 2841267	A	26-12-2003	FR	2841267 A1	26-12-2003
EP 1441071	A	28-07-2004	GB EP EP GB	2397604 A 1441071 A2 1441072 A2 2397605 A	28-07-2004 28-07-2004 28-07-2004 28-07-2004

Form PCT/A/210 (patent family annex) (January 2004)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: **BOWERMAN, Hugh G. et al.** Examiner: To Be Assigned
Serial No. To Be Assigned Group Art Unit: To Be Assigned
Filed: Herewith (May 3, 2006) Docket No. 91350-011600/US
Title: **TRAFFIC CONTROL BARRIERS**

MAIL STOP PCT (DO/EO/US)
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRELIMINARY AMENDMENT

Please amend the above-identified application prior to substantive examination as follows:

Amendments to the specification begin on page 2 of this paper.

Amendments to the claims begin on page 4 of this paper.

Remarks begin on page 7 of this paper.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

AMENDMENTS IN THE SPECIFICATION

On page 1, please insert the following paragraph after the title:

This application is a national stage filing under 35 U.S.C. 371 of International Application PCT/GB2004/004419 filed on October 20, 2004 which claims priority from Great Britain Application No: 0325693.0, filed on November 4, 2003. The entire teachings of the referenced application is incorporated herein by reference. International Application PCT/GB2004/004419 was published under PCT Article 21(2) in English.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G. et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

TRAFFIC CONTROL BARRIERS

ABSTRACT

A traffic control barrier comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors. The longitudinal axis of the or each connector extends in a direction transverse to the longitudinal axis of each block and in plain view, each block may be generally elliptical or rectangular.

AMENDMENTS IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

Claim 2 (currently amended): A barrier as claimed in claim 1 ~~wherein the metallic connectors~~ wherein the metallic connectors are rigid.

Claim 3 (currently amended): A barrier as claimed in claim 1 ~~or claim 2~~ wherein in plan view, each block is generally elliptical ~~or rectangular~~.

Claim 4 (currently amended): A barrier as claimed in ~~any one of claims 1 to 3~~ claim 1 wherein pads of a compressible material are positioned below block.

Claim 5 (original): A barrier as claimed in claim 4 wherein the undersurface of each pad has a relatively high coefficient of friction.

Claim 6 (currently amended): A barrier as claimed in claim 4 ~~or claim 5~~ wherein the pads are positioned at locations at or adjacent to block ends.

Claim 7 (currently amended): A barrier as claimed in ~~any one of claims 4 to 6~~ claim 4 wherein additional pads are positioned at locations intermediate to the block ends.

Claim 8 (currently amended): A barrier as claimed in ~~any one of claims 4 to 7~~ claim 4 wherein ~~neighbouring~~ neighboring pads are spaced apart such that their total length is less than that of the respective block.

Claim 9 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein the underside of each block and/or each pad is formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

Claim 10 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein the blocks are produced wholly or predominantly from a cementitious material.

Claim 11 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein one or more metal rods are welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces.

Claim 12 (currently amended): A barrier as claimed in claim 11 wherein the longitudinal axis of the or each-welded rod is substantially normal to the longitudinal axis of the casing.

Claim 13 (currently amended): A barrier as claimed in claim 11 or claim 13-wherein the rods are welded at their ends to the casing walls by a friction welding technique.

Claim 14 (original): A traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

Claim 15 (currently amended): A method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks each produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse to the longitudinal axis of the housing, positioning these blocks side-by-side across an area from which traffic is to be excluded, and securing each block to the or each neighbouring-neighboring block by one or more metallic connectors in a detachable manner.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

Claim 16 (new): A barrier as claimed in claim 1 wherein in plan view, each block is generally rectangular.

Claim 17 (new): A barrier as claimed in claim 1 wherein the underside of each pad is formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

REMARKS

Applicants have amended the originally filed Claims 1-15 and added new Claims 16-17. Claims 1-17 are now pending for this application. These changes and additions were made to improve the structure and format of the claims. No new matter has been added.

Any additional fees required in connection with this communication which are not specifically provided for herewith are authorized to be charged to the Deposit Account No. 50-2638 in the name of Greenberg Traurig LLP. Any overpayments are also authorized to be credited to this account. Please ensure that Attorney Docket Number 91350-011600 is referred to when charging any payments or credits for this case.

Respectfully submitted,

Date: May 3, 2006

/Margo Maddux/
Margo Maddux
Reg. No. 50,962

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PTO/SB/01 (04-05)

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**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**

Declaration Submitted With Initial Filing

OR

Declaration Submitted after Initial Filing (surcharge (37 CFR 1.18 (e)) required)

Attorney Docket Number	91350-011600/US
First Named Inventor	BOWERMAN, Hugh G. et al.
COMPLETE IF KNOWN	
Application Number	10/595,675
Filing Date	May 3, 2006
Art Unit	
Examiner Name	

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TRAFFIC CONTROL BARRIERS

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) 05/03/2006 as United States Application Number or PCT International

Application Number 10/595,675 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	Certified Copy Attached? NO
0325693.0	GB	11/04/2003	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.				
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])		Family Name or Surname		
Hugh G.		BOWERMAN		
Inventor's Signature				Date
Residence: City	State	Country	Citizenship	
Mailing Address				
City	State	Zip	Country	
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])		Family Name or Surname		
Lawrence W.		GIBBS		
Inventor's Signature				Date
Residence: City	State	Country	Citizenship	
Mailing Address				
City	State	Zip	Country	
<input type="checkbox"/> Additional inventors or a legal representative are being named on the supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.				

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DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet
		Page <u>1</u> of <u>1</u>

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Jurek J. A.		TOLLOCZKO	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
John H.		WHITTON	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
John-R.		MARSHALL	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ASSIGNMENT

WHEREAS, We, BOWERMAN, Hugh G.; GIBBS, Lawrence W.; TOLLOCZKO, Jurek, J., A.; WHITTON, John H.; and Marshall, John R., the undersigned inventors (ASSIGNORS), have invented a TRAFFIC CONTROL BARRIERS, for which an application for letters patent of the United States is being filed; we are the joint owners of this invention and improvements; and

WHEREAS, I hereby authorize and request the attorneys at Greenberg Traurig, LLP, of 2450 Colorado Ave, Suite 400E, Santa Monica, California 90404, to insert here in parentheses (Serial No. 10/595,675, Filed May 3, 2006) the application number and filing date of said application when known.

WHEREAS, CORUS UK LIMITED is a corporation organized and existing under the laws of the country of the United Kingdom, having a place of business at 30 Millbank, London, SW1P 4WY, the ASSIGNEE herein, desires to document its ownership of the entire right, title and interest in and to said inventions, applications and Letters Patent to be granted and issued thereon;

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) by the ASSIGNEE to us paid, and other valuable consideration, the receipt and legal sufficiency of all of which is hereby acknowledged, we, the said ASSIGNORS, acknowledge that we have transferred and do hereby sell, assign, transfer and set over unto said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to said inventions and all improvements thereon, in and to said application for Letters Patent thereon, in and to applications pertaining to or based upon said inventions and applications, including divisional and continuing applications and continuations-in-part, and in and to any and all Letters Patent which may be granted and issued on said inventions and applications, or any of them, not only for, to and in the United States of America, its territories and possessions, but for, to and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

We do hereby acknowledge that we have agreed, and do hereby agree, that we will, at the request of said ASSIGNEE, execute any and all applications for Letters Patent for said inventions and any and all other papers and documents and do all other and further lawful acts that said ASSIGNEE may deem necessary or desirable to obtain Letters Patent on said inventions, to secure the grant of such Letters Patent and to perfect and vest in the ASSIGNEE the entire right, title and interest in the inventions, applications and Letters Patent.

And for the above-named considerations, we do hereby authorize and empower the ASSIGNEE, its successors and assigns, to apply for and obtain, in its or their own names, Letters Patent for the said inventions before competent International Authorities and in any and all countries foreign to the United States in which applications for Letters Patent can be so made or Letters Patent so obtained.

Dated: _____	By _____ BOWERMAN, Hugh G.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

Dated: _____	By _____ GIBBS, Lawrence W.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

Dated: _____	By _____ TOLLOCZKO, Jurek J. A.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

Dated: _____	By _____ WHITTON, John H.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature.. name: _____ address: _____ _____

Dated: _____	By _____ MARSHALL, John R.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

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Enclosure B



Our Ref:JATAj03JW

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09 January 2008

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Re: US Patent Application No: 10/595,675 based on International Patent Application
No: PCT GB2004/004419 Vehicle Barrier

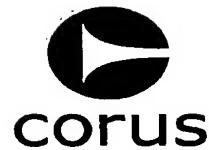
Dear John

The above patent has now been filed with the US Patent Office, to enable us to complete the filing; we require your signature on both copies of the Assignment and the Declaration, which are enclosed. We have also added a copy of the Application for your perusal. We would be very grateful for your response by return, I enclose a pre-addressed envelope for your convenience.

Yours sincerely

A handwritten signature in black ink that reads "Alison Judge".

Alison Judge, Ms
Administrator



Our Ref: JATaj02

Mr John Whitton
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19 December 2007

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**Re: US Patent Application No:10/595,675 based on International Patent Application No:
PCT/GB2004/004419 Vehicle Barrier**

Dear John

The above patent has now been filed with the US Patent Office, to enable us to complete the filing; we require your signature on both copies of the Assignment and the Declaration, which are enclosed. We have also added a copy of the Application for your perusal. We would be very grateful for your response by return, I enclose a pre-addressed envelope for your convenience.

Yours sincerely

A handwritten signature in black ink, appearing to read "Alison Judge".

Alison Judge, Ms
Administrator

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(72) Inventors; and

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NL, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

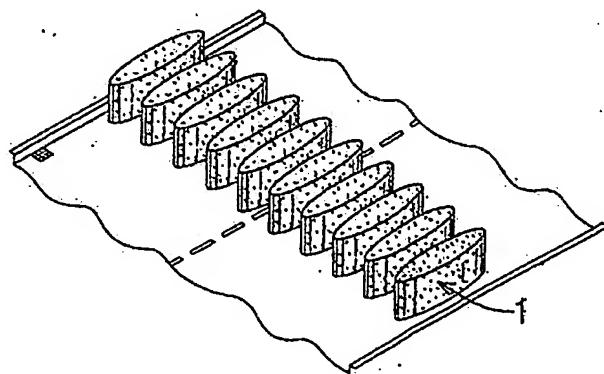
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Published:

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRAFFIC CONTROL BARRIERS



(57) Abstract: A traffic control barrier comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors. The longitudinal axis of the or each connector extends in a direction transverse to the longitudinal axis of each block and in plan view, each block may be generally elliptical or rectangular.

WO 2005/054582 A1

TRAFFIC CONTROL BARRIERS

This invention relates to barriers for controlling the flow of traffic.

Barriers for preventing a vehicle entering a designated area are well known. These barriers typically include, for example, permanent walls and bollards, neither of which are readily deployable. Where deployable barriers are employed, these typically comprise a series of heavy concrete blocks spaced apart by a distance less than the width of a vehicle whose access is to be prevented. These blocks are difficult to transport and manoeuvre in place because of their shape and weight, are unsightly and can often be displaced sufficiently to enable a vehicle to pass.

Safety control barriers for redirecting traffic on, for example, a motorway under repair, also typically comprise a series of individual elongate blocks spaced apart to define one or more sides of a lane to be followed by traffic. Such blocks are typically rectangular in plan view and are, on occasions, connected together at their ends by rods, chains or other similar components.

The present invention sets out to provide traffic control barriers which are more readily transportable and manoeuvrable and which are more efficient in controlling traffic flow than presently available barriers.

In one aspect, the invention provides a traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

... In plan view, each block may be generally elliptical or rectangular.

Pads of a compressible material may be positioned below each block. These pads may be positioned at locations at or adjacent to the block ends. Additional pads may be positioned at locations intermediate the block ends. In a preferred embodiment, neighbouring pads are spaced apart such that their total length is less than that of the respective block.

The underside of each block and/or each pad may be formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

Preferably, the blocks are produced wholly or predominantly from a cementitious material, e.g. concrete. In such an arrangement, the upstanding sides of a concrete block may be housed within a metallic casing. The casing may be produced from, for example, steel or aluminium. One or more metal rods may be welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces. The longitudinal axis of the or each welded rod may be substantially normal to the longitudinal axis of the casing. The rods may be welded at their ends to the casing walls by a friction welding technique.

In another aspect, the invention provides a traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

In a further aspect, the invention provides a method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks, positioning these blocks side-by-side across an area from which traffic is to be excluded, and securing each

block to the or each neighbouring block by one or more metallic connectors in a detachable manner.

Each block may be produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse (e.g. substantially normal) to the longitudinal axis of the housing.

The Invention will now be described, by way of example only, with reference to the accompanying diagrammatic drawings in which:-

Figure 1 is a schematic view of a traffic control barrier in accordance with the invention positioned across a road surface;

Figure 2 is a plan view of the upper surface of a block which forms part of the vehicle barrier illustrated in Figure 1;

Figure 3 is a plan view of the under-surface of the block illustrated in Figure 2;

Figure 4 is side view of the block illustrated in Figures 2 and 3; and

Figure 5 is a side view in section of a metallic connector used to connect neighbouring pairs of the blocks illustrated in Figures 1 to 4.

As will be seen from Figure 1, a traffic control barrier in accordance with the Invention comprises a plurality of side-by-side elongate concrete blocks 1 spaced apart by a distance significantly less than that of a vehicle whose progress is to be controlled. As shown, the blocks are generally elliptical in plan view and are positioned with their rounded ends directed towards any traffic which may approach the barrier. Thus, an entire roadway or entrance can effectively be sealed off from a flow of traffic by

suitable positioning of the barrier blocks. Other elongate shapes, such as rectangular or diamond, can be adopted for the individual blocks.

As will be seen from Figures 2 to 4, each block comprises a central mass of concrete 2 enveloped in a steel casing 3 formed from steel plates 4, 5. Rigid steel bars 6 extend between the inner surfaces of the plates 4, 5 with their ends welded to the plates by, for example, a friction welding technique. At their side edges, the plates are welded to upstanding metal tubes 7 to define the generally elliptical shaping for the blocks.

Open ended tubes 8 extend through the blocks with their open ends projecting a small distance from the casing outer surface. These open ends may be selectively closed by suitably dimensioned removable caps (not shown). Lifting hoops 9 (see Figure 4) project from the upper surface of each block to assist manoeuvring and positioning of the blocks in use. Each lifting hoop includes an anchorage 11 embedded in the concrete mass.

As will be seen from Figure 3, ribbed rubber pads 12 are secured to the under-surface of each block to increase the contact stress between the blocks and the road surface on which it is mounted. The undersurface of the pads may comprise a material having a high coefficient of friction and the pads 12 preferably extend over the full width of the block under-surface and are positioned towards each block end. Additional pads may be provided.

Manufacture of the blocks is achieved by friction welding the steel bars 6 to the inner surface of each steel plate 4, 5 and welding the plate ends to the metal tubes 7. The tubes 8 are positioned between suitably dimensioned openings formed in the plate surfaces and the entire central area of each block is filled with concrete. Prior to casting of the concrete, the lifting hoop anchorages 11 are positioned as shown in Figure 2. Once the concrete is set, the ribbed pads 12 are secured to the under-surface of

each block and each lifting hoop 9 fitted to its anchorage. For additional weight, iron ingots or the like may be positioned within the casing before casting of the concrete.

Typically, the height of each block is between 800 and 1000mm with the tubes 8 positioned approximately at mid-height of the plates 4, 5. The length of each block is typically between 2000mm and 4000mm and the maximum width of each block is typically between 450 and 650mm.

Connectors for detachably joining the blocks together are illustrated in Figure 5. These connectors include the metal tubes 8 which are embedded within the concrete mass of the blocks. Each tube 8 has a bore for receiving one or a series of connector rods 15. Each rod is formed at its ends with external threads to receive an internally threaded tubular end-piece 16 positioned one at each end of a metallic connecting member 17. The connector rod 15 extends within the metal tube 8 by a distance of at least 1.5 x tube internal diameter. Flats may be formed on each connecting member to assist the connection procedure.

When a traffic control barrier is required, several blocks are transported to site and off-loaded from the carrying vehicle using a conventional lifting device which cooperates with the hoops 9. As a block is positioned, one or a series of threaded rods 15 are inserted into the bore of the block and the female end of a connecting member 16 is secured to the exposed end of the outermost threaded rod. A second block is then positioned close to the first block and the other female end of the connecting member is secured to the bore mounted threaded rod of that block. This process is repeated until the entire road section to which traffic access is to be refused is covered. To remove the barrier, this process is repeated in reverse.

It will be appreciated that the foregoing is merely exemplary of traffic control barriers in accordance with the invention and that

modifications can readily be made thereto without departing from the scope of the invention as set out in the accompanying claims.

CLAIMS

1. A traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.
2. A barrier as claimed in claim 1 wherein the metallic connectors wherein the metallic connectors are rigid.
3. A barrier as claimed in claim 1 or claim 2 wherein in plan view, each block is generally elliptical or rectangular.
4. A barrier as claimed in any one of claims 1 to 3 wherein pads of a compressible material are positioned below each block.
5. A barrier as claimed in claim 4 wherein the undersurface of each pad has a relatively high coefficient of friction.
6. A barrier as claimed in claim 4 or claim 5 wherein the pads are positioned at locations at or adjacent to the block ends.
7. A barrier as claimed in any one of claims 4 to 6 wherein additional pads are positioned at locations intermediate the block ends.
8. A barrier as claimed in any one of claims 4 to 7 wherein neighbouring pads are spaced apart such that their total length is less than that of the respective block.
9. A barrier as claimed in any one of the preceding claims wherein the underside of each block and/or each pad is formed with a series of

ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

10. A barrier as claimed in any one of the preceding claims wherein the blocks are produced wholly or predominantly from a cementitious material.
11. A barrier as claimed in any one of the preceding claims wherein one or more metal rods are welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces.
12. A barrier as claimed in claim 11 wherein the longitudinal axis of the or each welded rod is substantially normal to the longitudinal axis of the casing.
13. A barrier as claimed in claim 11 or claim 13 wherein the rods are welded at their ends to the casing walls by a friction welding technique.
14. A traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.
15. A method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks each produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse to the longitudinal axis of the housing, positioning these blocks side-by-side across an area from which traffic is to be excluded, and

WO 2005/054582

PCT/GB2004/004419

9

securing each block to the or each neighbouring block by one or
more metallic connectors in a detachable manner.

1/2

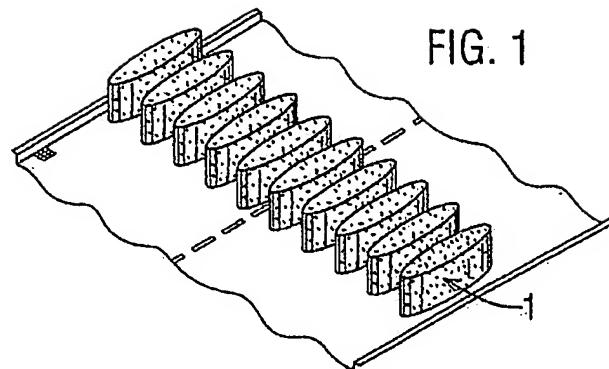


FIG. 2

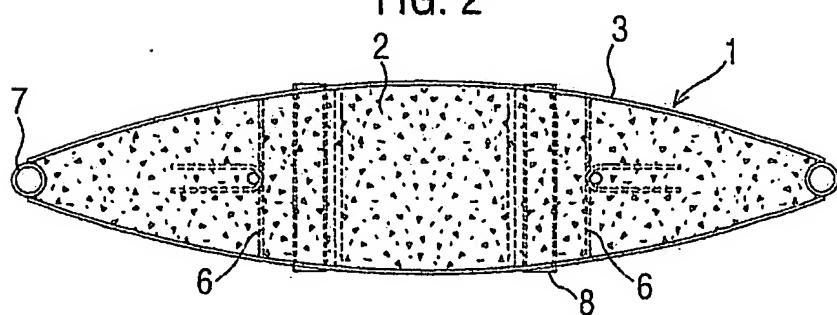
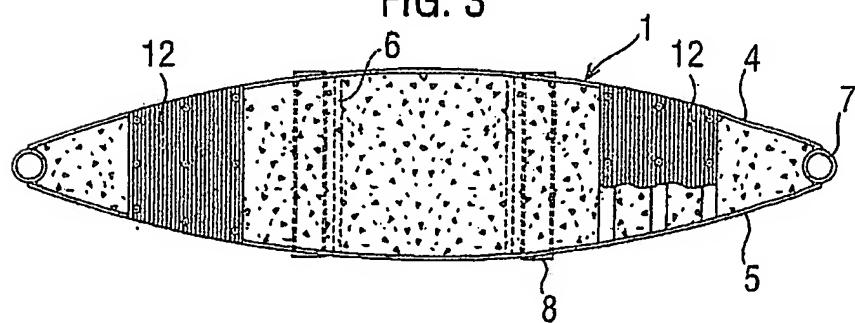


FIG. 3



SUBSTITUTE SHEET (RULE 26)

2/2

FIG. 4

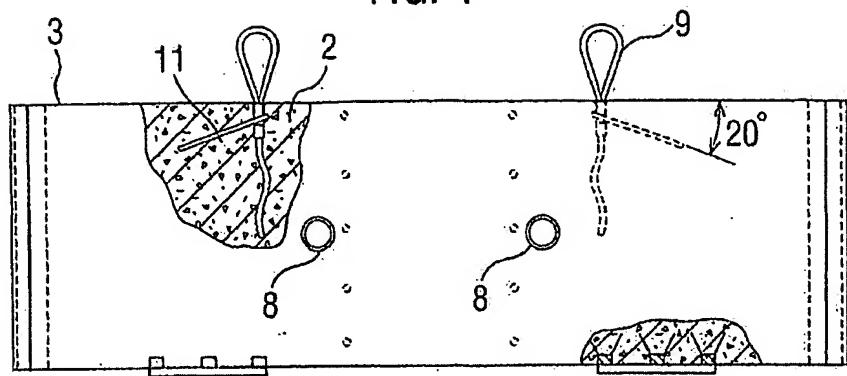
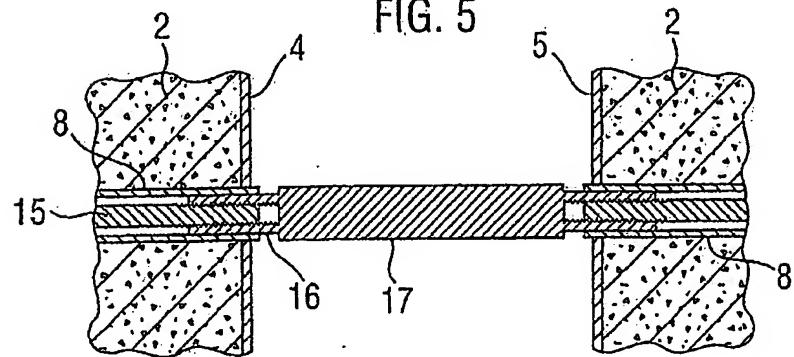


FIG. 5



SUBSTITUTE SHEET (RULE 26)

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/GB2004/004419

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E01F13/02 E01F13/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E01F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 990 736 A (PEREIRA CARLOS) 5 April 2000 (2000-04-05) paragraph '0012! - paragraph '0032!; figures 1,2,4	1-6,12, 14
P,X	FR 2 841 267 A (FERRARI ROLAND) 26 December 2003 (2003-12-26) page 2, paragraph 2 - page 4, paragraph 3; figures 1,2	1,3,9, 10,14
P,A	EP 1 441 071 A (CORUS UK LTD) 28 July 2004 (2004-07-28) the whole document	1-15

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *V* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *E* document member of the same patent family

Date of the actual completion of the International search

25 November 2004

Date of mailing of the International search report

03/02/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5018 Potsdamerstr.
NL - 2280 HV Hamburg
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Fax: (+49-70) 340-3916

Authorized officer

Geiger, H

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int'l	Int'l Application No
P	GB2004/004419

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0990736	A	05-04-2000	FR EP	2784126 A1 0990736 A1	07-04-2000 05-04-2000
FR 2841267	A	26-12-2003	FR	2841267 A1	26-12-2003
EP 1441071	A	28-07-2004	GB EP EP GB	2397604 A 1441071 A2 1441072 A2 2397605 A	28-07-2004 28-07-2004 28-07-2004 28-07-2004

Form PCT/ISA/210 (patent family annex) (January 2004)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: **BOWERMAN, Hugh G. et al.** Examiner: To Be Assigned
Serial No. To Be Assigned Group Art Unit: To Be Assigned
Filed: Herewith (May 3, 2006) Docket No. 91350-011600/US
Title: **TRAFFIC CONTROL BARRIERS**

MAIL STOP PCT (DO/EO/US)
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRELIMINARY AMENDMENT

Please amend the above-identified application prior to substantive examination as follows:

Amendments to the specification begin on page 2 of this paper.

Amendments to the claims begin on page 4 of this paper.

Remarks begin on page 7 of this paper.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

AMENDMENTS IN THE SPECIFICATION

On page 1, please insert the following paragraph after the title:

This application is a national stage filing under 35 U.S.C. 371 of International Application PCT/GB2004/004419 filed on October 20, 2004 which claims priority from Great Britain Application No: 0325693.0, filed on November 4, 2003. The entire teachings of the referenced application is incorporated herein by reference. International Application PCT/GB2004/004419 was published under PCT Article 21(2) in English.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

TRAFFIC CONTROL BARRIERS

ABSTRACT

A traffic control barrier comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors. The longitudinal axis of the or each connector extends in a direction transverse to the longitudinal axis of each block and in plain view, each block may be generally elliptical or rectangular.

AMENDMENTS IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A traffic control barrier which comprises at least two side-by-side elongate solid blocks each housed within a metallic casing whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

Claim 2 (currently amended): A barrier as claimed in claim 1 ~~wherein the metallic connectors~~ wherein the metallic connectors are rigid.

Claim 3 (currently amended): A barrier as claimed in claim 1 ~~or claim 2~~ wherein in plan view, each block is generally elliptical ~~or rectangular~~.

Claim 4 (currently amended): A barrier as claimed in ~~any one of claims 1 to 3~~ claim 1 wherein pads of a compressible material are positioned below block.

Claim 5 (original): A barrier as claimed in claim 4 wherein the undersurface of each pad has a relatively high coefficient of friction.

Claim 6 (currently amended): A barrier as claimed in claim 4 ~~or claim 5~~ wherein the pads are positioned at locations at or adjacent to block ends.

Claim 7 (currently amended): A barrier as claimed in ~~any one of claims 4 to 6~~ claim 4 wherein additional pads are positioned at locations intermediate to the block ends.

Claim 8 (currently amended): A barrier as claimed in ~~any one of claims 4 to 7~~ claim 4 wherein ~~neighbouring~~ neighboring pads are spaced apart such that their total length is less than that of the respective block.

Claim 9 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein the underside of each block and/or each pad is formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

Claim 10 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein the blocks are produced wholly or predominantly from a cementitious material.

Claim 11 (currently amended): A barrier as claimed in any one of the preceding claims-claim 1 wherein one or more metal rods are welded to opposed internal surfaces of the metallic casing such that the or each rod extends across the width of the casing with its ends secured to the opposed surfaces.

Claim 12 (currently amended): A barrier as claimed in claim 11 wherein the longitudinal axis of the or each-welded rod is substantially normal to the longitudinal axis of the casing.

Claim 13 (currently amended): A barrier as claimed in claim 11 or claim 13-wherein the rods are welded at their ends to the casing walls by a friction welding technique.

Claim 14 (original): A traffic control barrier which comprises at least two side-by-side elongate solid blocks whose sides are detachably connected together by one or more metallic connectors, the longitudinal axis of the or each connector extending in a direction transverse to the longitudinal axis of each block.

Claim 15 (currently amended): A method of producing a dismountable traffic control barrier which comprises transporting to a given site two or more elongate blocks each produced by casting a cementitious material into an elongate metallic housing whose side walls are interconnected by metallic rods or bars which extend in a direction transverse to the longitudinal axis of the housing, positioning these blocks side-by-side across an area from which traffic is to be excluded, and securing each block to the or each neighbouring neighboring block by one or more metallic connectors in a detachable manner.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

Claim 16 (new): A barrier as claimed in claim 1 wherein in plan view, each block is generally rectangular.

Claim 17 (new): A barrier as claimed in claim 1 wherein the underside of each pad is formed with a series of ridges or grooves to increase the contact stress between the block and the surface on which it is mounted.

US National Phase for PCT/GB2004/004419
Applicant: Bowerman, Hugh. G, et al.
Title: TRAFFIC CONTROL BARRIERS
By Electronic Submission
Docket No. 91350-011600/US
Filed Herewith (May 3, 2006)

REMARKS

Applicants have amended the originally filed Claims 1-15 and added new Claims 16-17. Claims 1-17 are now pending for this application. These changes and additions were made to improve the structure and format of the claims. No new matter has been added.

Any additional fees required in connection with this communication which are not specifically provided for herewith are authorized to be charged to the Deposit Account No. 50-2638 in the name of Greenberg Traurig LLP. Any overpayments are also authorized to be credited to this account. Please ensure that Attorney Docket Number 91350-011600 is referred to when charging any payments or credits for this case.

Respectfully submitted,

Date: May 3, 2006

/Margo Maddux/
Margo Maddux
Reg. No. 50,962

Customer Number 33717
GREENBERG TRAURIG, LLP
2450 Colorado Avenue, Suite 400E
Santa Monica, CA 90404
Phone: (310) 586-7700
Fax: (310) 586-7800
E-mail: LAIPmail@gtlaw.com

PTO/SB/01 (04-05)

Approved for use through 07/31/2006, OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**

Declaration Submitted With Initial Filing

OR

Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

Attorney Docket Number	91350-011600/US
First Named Inventor	BOWERMAN, Hugh G. et al.
COMPLETE IF KNOWN	
Application Number	10/595,675
Filing Date	May 3, 2006
Art Unit	
Examiner Name	

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TRAFFIC CONTROL BARRIERS

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) 05/03/2006 as United States Application Number or PCT International

Application Number 10/595,675 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	Certified Copy Attached? NO
0325693.0	GB	11/04/2003	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2..

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DECLARATION — Utility or Design Patent Application

Direct all correspondence to:		<input checked="" type="checkbox"/> The address associated with Customer Number:	33717	OR <input type="checkbox"/> Correspondence address below
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Address				
City		State	ZIP	
Country		Telephone	Email	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.				
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])		Family Name or Surname		
Hugh G.		OWERMAN		
Inventor's Signature			Date	
Residence: City	State	Country	Citizenship	
Mailing Address				
City	State	Zip	Country	
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])		Family Name or Surname		
Lawrence W.		GIBBS		
Inventor's Signature			Date	
Residence: City	State	Country	Citizenship	
Mailing Address				
City	State	Zip	Country	

Additional inventors or a legal representative are being named on the _____ supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.

PTO/SB/02A (09-04)

Approved for use through 07/31/2008. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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DECLARATION	ADDITIONAL INVENTOR(S) Supplemental Sheet
Page <u>1</u> of <u>1</u>	

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Jurek J. A.		TOLLOCZKO	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
John H.		WHITTON	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
John R.		MARSHALL	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

ASSIGNMENT

WHEREAS, We, BOWERMAN, Hugh G.; GIBBS, Lawrence W.; TOLLOCZKO, Jurek, J., A.; WHITTON, John H.; and Marshall, John R., the undersigned inventors (ASSIGNORS), have invented a TRAFFIC CONTROL BARRIERS, for which an application for letters patent of the United States is being filed; we are the joint owners of this invention and improvements; and

WHEREAS, I hereby authorize and request the attorneys at Greenberg Traurig, LLP, of 2450 Colorado Ave, Suite 400E, Santa Monica, California 90404, to insert here in parentheses (Serial No. 10/595,675, Filed May 3, 2006) the application number and filing date of said application when known.

WHEREAS, CORUS UK LIMITED is a corporation organized and existing under the laws of the country of the United Kingdom, having a place of business at 30 Millbank, London, SW1P 4WY, the ASSIGNEE herein, desires to document its ownership of the entire right, title and interest in and to said inventions, applications and Letters Patent to be granted and issued thereon;

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) by the ASSIGNEE to us paid, and other valuable consideration, the receipt and legal sufficiency of all of which is hereby acknowledged, we, the said ASSIGNORS, acknowledge that we have transferred and do hereby sell, assign, transfer and set over unto said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to said inventions and all improvements thereon, in and to said application for Letters Patent thereon, in and to applications pertaining to or based upon said inventions and applications, including divisional and continuing applications and continuations-in-part, and in and to any and all Letters Patent which may be granted and issued on said inventions and applications, or any of them, not only for, to and in the United States of America, its territories and possessions, but for, to and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

We do hereby acknowledge that we have agreed, and do hereby agree, that we will, at the request of said ASSIGNEE, execute any and all applications for Letters Patent for said inventions and any and all other papers and documents and do all other and further lawful acts that said ASSIGNEE may deem necessary or desirable to obtain Letters Patent on said inventions, to secure the grant of such Letters Patent and to perfect and vest in the ASSIGNEE the entire right, title and interest in the inventions, applications and Letters Patent.

And for the above-named considerations, we do hereby authorize and empower the ASSIGNEE, its successors and assigns, to apply for and obtain, in its or their own names, Letters Patent for the said inventions before competent International Authorities and in any and all countries foreign to the United States in which applications for Letters Patent can be so made or Letters Patent so obtained.

Dated: _____	By _____ BOWERMAN, Hugh G.
Witnessed By: signature name: _____ address: _____	Witnessed By: signature name: _____ address: _____

Dated: _____	By _____ GIBBS, Lawrence W.
Witnessed By: signature name: _____ address: _____	Witnessed By: signature name: _____ address: _____

Dated: _____	By _____ TOLLOCZKO, Jurek J. A.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

Dated: _____	By _____ WHITTON, John H.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

Dated: _____	By _____ MARSHALL, John R.
Witnessed By: signature name: _____ address: _____ _____	Witnessed By: signature name: _____ address: _____ _____

IP

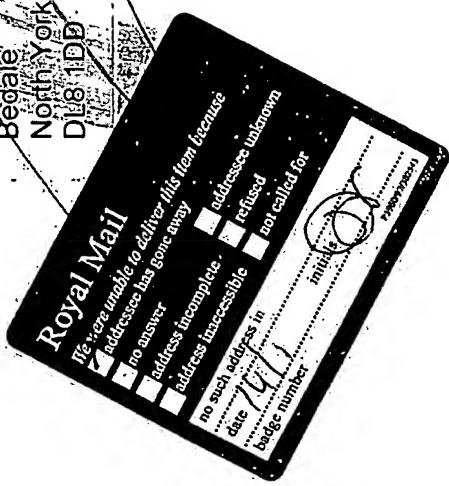
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Reference	DW 3735 5362 1GB

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Enclosure C

Wahl, John R. (OfCnl-Den-IP)

From: Claire Evans [Claire.Evans@fhs.co.uk]
Sent: Monday, January 21, 2008 10:22 AM
To: Wahl, John R. (OfCnl-Den-IP)
Subject: P59063T US/CE/kb Our file 091350.011600 Traffic ControlBarriers

Attachments: enclosures.pdf; letters and receipts.pdf



enclosures.pdf (1 MB) letters and receipts.pdf (333 ...)

Dear John

Further to my email of 11 December 2007, I attach a copy of the letters which have been sent to the two non-signing inventors and the receipts for some of those letters. I also attach a copy of the enclosures which were sent with each of the letters.

As you will see, a first set of letters was sent on 19/20 December 2007. These were sent by recorded mail, but, unfortunately, because they were sent through the Corus mailroom, no receipts showing the addressee of each letter were received, only a reference number for each letter.

I was not sure if this would be acceptable, and so I instructed Corus to send the letters once again by recorded mail, this time taking them to the Post Office so that we would receive a receipt for each letter showing the addressee. Accordingly, a second set of letters was sent on 9 January 2008, and the receipts are attached below.

The letter to John Whitton was returned to Corus as he has moved.

Corus do not have any way of finding the correct address for John as he left Corus several years ago. A copy of the envelope for this letter is attached below.

The letter to Lawrence Gibbs was delivered on 11 January 2008 as can be seen from the attached extract from the Royal Mail website. No response has been received.

Both inventors are UK citizens.

I hope that I have provided you with all the documents and information that you require to file the petition by the extended deadline of 9 February 2008. If you require anything further, please let me know.

Please acknowledge receipt of this email by return.

Regards

Claire

Claire Evans
UK / European Patent Attorney

Fry Heath Spence LLP
The Gables, Massetts Road
Horley, Surrey RH6 7DQ

Tel: +44 (0) 1293 776880
Fax: +44 (0) 1293 776837
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